

REMARKS

Claims 1, 4, 5 and 21 are currently pending in the subject application and are presently under consideration. A version of the claims is found at pages 2-4. Independent claims 1 and 21 have been amended herein, and claim 2 has been cancelled herein. Support for the amendments to claims 1 and 21 can be found at least at page 24, line 26 – page 25, line 22 of the instant specification. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments herein.

I. Rejection of Claims 1, 2, 4, 5 and 21 Under 35 U.S.C. §112

Claims 1, 2, 4, 5 and 21 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In view of the amendments to the subject claims, this rejection is now believed to be moot and should be withdrawn.

II. Rejection of Claims 1, 2, 4, 5 and 21 Under 35 U.S.C. §102(b)

Claims 1, 2, 4, 5 and 21 stand rejected under 35 U.S.C. §102(b) as being anticipated by Coffee RA (WO 98/03267). Applicant's representative respectfully requests that this rejection be withdrawn for at least the following reasons. Coffee RA fails to disclose each and every limitation set forth in the subject claims.

A single prior art reference anticipates a patent claim only if it expressly or inherently describes **each and every limitation** set forth in the patent claim. *Trintec Industries, Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 63 USPQ2d 1597 (Fed. Cir. 2002); *See Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). *The identical invention must be shown in as complete detail as is contained in the ... claim.* *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). (emphasis added).

The claimed invention relates to the use of electroprocessed fibrin for engineered biological tissue applications. In particular, amended independent claim 1 recites an electrodeposited fibrin matrix with cells, the cells are delivered to the matrix during fabrication of the electrodeposited fibrin matrix, *wherein the cells are suspended in a solution comprising*

molecules capable of forming fibrin during delivery to the matrix. In addition, independent claim 21 recites an electrodeposited fibrin matrix with cells, wherein cells are entrapped within the matrix during fabrication of the electrodeposited fibrin matrix, *wherein the cells are suspended in a fibrinogen solution during delivery to the matrix.* Coffee RA does not disclose such aspects of the claimed invention.

Coffee RA generally relates to applying material to a surface, and more specifically, applying material to skin for use in the care of treatment of wounds or burns. In one aspect, Coffee fabricates the material for treating skin using an electroprocessing method. However, for example, Coffee does not disclose specific electrodeposition method steps for the additional placement of cells upon an electroprocessed matrix. As a consequence, Coffee RA does not further provide for the delivery of cells to a fibrin matrix during an electroprocessing fabrication process of the fibrin matrix, *wherein the cells are suspended in a solution comprising molecules capable of forming fibrin during delivery to the matrix.* Additionally, the reference is silent regarding suspending the cells *in a fibrinogen solution during delivery to the matrix.* Therefore, Coffee RA does not disclose the identical invention in as much detail as is recited in amended independent claims 1 and 21. Accordingly, this rejection should be withdrawn.

III. Rejection of Claims 1, 2 and 21 Under 35 U.S.C. §102(b)

Claims 1, 2 and 21 stand rejected under 35 U.S.C. §102(b) as being anticipated by Freyssinet *et al.* (Freyssinet J-M *et al.*, “Fibrinogen and Fibrin in Strong Magnetic Fields. Complementary Results and Discussion,” *Biochemie*, 1984, pp. 81-85, vol. 66). Applicant’s representative respectfully requests that this rejection be withdrawn for at least the following reasons. Freyssinet *et al.* fails to disclose each and every limitation set forth in the subject claims.

A single prior art reference anticipates a patent claim only if it expressly or inherently describes **each and every limitation** set forth in the patent claim. *Trintec Industries, Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 63 USPQ2d 1597 (Fed. Cir. 2002); *See Verdegaaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). *The identical invention must be shown in as complete detail as is contained in the ... claim.* *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). (emphasis added).

Freyssinet *et al.* relates to measuring fibrin orientation using magnetically induced birefringence. More particularly, in one aspect, the reference attempts to achieve highly oriented fibrin gels by copairing polymerization and orientation of fibrin in high magnetic fields when the polymer is initiated from a monomer solution, or alternatively, by thrombin limited proteolysis of fibrinogen. Studied samples were contained in quartz cells having select optical path lengths. However, the reference does not disclose electrodeposition as taught by the present invention nor does it contemplate the further application of cells within the prospective fibrin gels, let alone attempting incorporation of such cells within the fibrin gels during the fibrin gel fabrication process. As a result, the reference fails to disclose all aspects recited in independent claims 1 and 21. Therefore, this rejection should be withdrawn.

IV. Rejection of Claims 1, 2, 4, 5 and 21 Under 35 U.S.C. §102(e)

Claims 1, 2, 4, 5 and 21 stand rejected under 35 U.S.C. §102(e) as being anticipated by Coffee (US 2001/0003148, US 6,252,129). Applicant's representative respectfully requests that this rejection be withdrawn for at least the following reasons. Coffee fails to disclose each and every limitation set forth in the subject claims.

A single prior art reference anticipates a patent claim only if it expressly or inherently describes **each and every limitation** set forth in the patent claim. *Trintec Industries, Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 63 USPQ2d 1597 (Fed. Cir. 2002); *See Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). *The identical invention must be shown in as complete detail as is contained in the ... claim.* *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). (emphasis added).

Coffee (US 2001/0003148 and US 6,252,129) relates to forming solid, partially-solid, fibers, fibrils, fiber fragments, segments, droplets or particles by an electrohydrodynamic process. More particularly, the reference focuses on methods for forming composite matter, and details regarding the particular steps of the applying the solutions that eventually form the fibers of the composite matter. However, Coffee does not go further and specify ways of inserting cells into the composite matter during the fabrication of the composite matter. Consequently, the cited reference does not disclose electrodeposited fibrin matrix with cells, wherein the cells are

delivered to the matrix during fabrication of the electrodeposited fibrin matrix, *wherein the cells are suspended in a solution comprising molecules capable of forming fibrin during delivery to the matrix*, as recited in amended independent claim 1. Moreover, the reference is silent regarding suspending the cells *in a fibrinogen solution during delivery to the matrix*, as recited in amended independent claim 21. Accordingly, this rejection should be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 06-1448.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicant's undersigned representative at the telephone number below.

Respectfully submitted,

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